

SYSTEM AND METHOD FOR INCREASING THE STRENGTH OF
A BOND MADE BY A SMALL DIAMETER WIRE IN BALL BONDING

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ABSTRACT OF THE DISCLOSURE

A system and method is disclosed for increasing the strength of a bond made by a small diameter wire in ball bonding. In one embodiment of the invention a structure for receiving a ball bond comprises substrate material that has portions that form a substrate cavity and a wire bond pad that covers and fills the substrate cavity. The wire bond pad also has portions that form a wire bond cavity for receiving the ball bond. The ball is wirebonded to the sides and bottom of the wire bond cavity. The sides of the wire bond cavity provide additional strength to the bond to resist shear and tensile forces that may act on the wire.